

CLAIMS

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1. A crystalline substrate based device comprising:
a crystalline substrate having formed thereon a microstructure; and
at least one packaging layer which is sealed over said microstructure by means of an adhesive and defines therewith at least one gap between said crystalline substrate and said at least one packaging layer.

2. A crystalline substrate based device according to claim 1 and wherein said at least one packaging layer is sealed onto said crystalline substrate using an adhesive.

3. A crystalline substrate based device according to claim 2 and wherein said adhesive comprises epoxy.

4. A crystalline substrate based device according to claim 1 and wherein said crystalline substrate comprises silicon.

5. A crystalline substrate based device according to claim 1 and wherein said at least one packaging layer is transparent.

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6. A crystalline substrate based device according to claim 1 and wherein said at least one cavity comprises a plurality of cavities.

7. A crystalline substrate based device according to claim 1 and wherein said microstructure comprises a micromechanical structure.

8. A crystalline substrate based device according to claim 1 and wherein said microstructure comprises a microelectronic structure.

9. A crystalline substrate based device according to claim 1 and wherein said microstructure comprises an optoelectronic structure.

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10. A chip scale packaged crystalline substrate comprising:

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a substrate having formed thereon a microstructure; and
at least one chip scale package which is sealed over said microstructure and
defines therewith at least one gap.

11 12. A chip scale packaged crystalline substrate according to claim ¹⁰11 and wherein
said at least one package is sealed onto said substrate using an adhesive.

12 13. A chip scale packaged crystalline substrate based device according to claim ¹¹12
and wherein said adhesive comprises epoxy.

13 14. A chip scale packaged crystalline substrate according to claim ¹⁰11 and wherein
said substrate comprises silicon.

14 15. A chip scale packaged crystalline substrate according to claim ¹⁰11 and wherein
said substrate comprises lithium niobate.

15 16. A chip scale packaged crystalline substrate according to claim ¹⁰11 and wherein
said at least one package is at least partially transparent.

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16 17. A chip scale packaged crystalline substrate according to claim ¹⁰11 and wherein
said at least one cavity comprises a plurality of cavities.

17 18. A chip scale packaged crystalline substrate according to claim ¹⁰11 and wherein
said microstructure comprises a micromechanical structure.

18 19. A chip scale packaged crystalline substrate according to claim ¹⁰11 and wherein
said microstructure comprises a microelectronic structure.

19 20. A chip scale packaged crystalline substrate according to claim 1 and wherein
said microstructure comprises a optoelectronic structure.

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20 21. A method of producing a crystalline substrate based device comprising:

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providing a microstructure on a substrate; and
adhesively sealing at least one packaging layer over said microstructure and at
least partially spaced therefrom, thereby to define a gap between said microstructure
and said at least one packaging layer.

21 22. A method of producing a crystalline substrate based device according to claim
21²⁰ and wherein said at least one packaging layer is sealed onto said crystalline substrate
using an adhesive.

22 23. A method of producing a crystalline substrate based device according to claim
22²¹ and wherein said adhesive comprises Epoxy.

23 24. A method of producing a crystalline substrate based device according to claim
21²⁰ and wherein said crystalline substrate comprises silicon.

24 25. A method of producing a crystalline substrate based device according to claim
23²⁴ and wherein said crystalline substrate comprises lithium niobate.

25 26. A method of producing a crystalline substrate based device according to claim
21²⁰ and wherein said at least one packaging layer is transparent.

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197 26 27. A method of producing a crystalline substrate based device according to claim
21²⁰ and wherein said at least one cavity comprises a plurality of cavities.

27 28. A method of producing a crystalline substrate based device according to claim
21²⁰ and wherein said microstructure comprises a micromechanical structure.

28 29. A method of producing a crystalline substrate based device according to claim
21²⁰ and wherein said microstructure comprises a microelectronic structure.

29 30. A method of producing a crystalline substrate based device according to claim
21²⁰ and wherein said microstructure comprises a optoelectronic structure.

30 31. A crystalline substrate based device according to claim 1 and wherein said crystalline substrate comprises lithium tantalate.

31 32. A crystalline substrate based device according to claim 1 and wherein said microstructure comprises a surface acoustic wave device.

sub 178 32 33. A chip scale packaged crystalline substrate according to claim 1 and wherein said microstructure comprises a surface acoustic wave device.

33 34. A method of producing a crystalline substrate based device according to claim 21 and wherein said crystalline substrate comprises lithium tantalate.

34 35. A method of producing a crystalline substrate based device according to claim 21 and wherein said microstructure comprises a surface acoustic wave device.

35 36. A crystalline substrate based device according to claim 1 and wherein said crystalline substrate comprises quartz.

36 37. A method of producing a crystalline substrate based device according to claim 21 and wherein said crystalline substrate comprises quartz.

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